



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,360	09/26/2003	Pascal Gannon	243340US0CONT	5278
22850	7590	03/10/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SASTRI, SATYA B	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,360

Applicant(s)

GONNON ET AL.

Examiner

Satya B Sastri

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/24/03, 9/26/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

AA

Art Unit: 1713

DETAILED ACTION

1. This office action is in response to application filed on September 26, 2003. *Claims 1-56* are now pending in the application.

Specification

2. The disclosure is objected to because of the following informalities:

In claim 5, component (c) should be changed to polyalkylene glycol **ethylenic urethane monomer** to be consistent with the independent claim (*claim 1*).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. *Claim 10* recites the limitation "wherein the ethylenic monomers having at least two polymerizable group" in the method of *claim 1*. There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

Art Unit: 1713

5. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

6. *Claims 4, 5, 9, 25, 26, 30, 31, 32* are rejected under 35 U.S.C. 101 as claiming the same invention as that of *claims 4, 1, 8, 24, 21, 28, 29 and 30*, respectively, of prior U.S. Patent No. US 6,752,866 to Gonnon et al. This is a double patenting rejection.

Art Unit: 1713

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. *Claims 1-3, 6-8, 11-24, 27-29, 33-56* are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-56 of U.S. Patent No. 6,752,866 to Gonnon et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the instant claims encompasses the scope of the prior art claims.

Art Unit: 1713

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. *Claims 1-3, 5-7, 12-24, 26-28, 33-56* are rejected under 35 U.S.C. 103(a) as being unpatentable over Burge et al. (US 4,686,252) in view of Blum (US 6,057,398).

The prior art based on Burge et al. discloses a method for preparing a building or construction material wherein a polymer modified aqueous dispersion containing amorphous silicon dioxide and at least one polymer is mixed and reacted with at least one inorganic binder (abstract, lines 1-5). The copolymer may be based on monomers such as vinyl esters, acrylic acid esters, styrene, butadiene, or vinylhalogen compounds (column 2, lines 65-69 and column 3, line1). The aqueous dispersion comprising the mineral particle (amorphous silicon dioxide) is prepared by adding silicon dioxide to water in a high-speed mixer (dissolver). Following the addition of polymer, the aqueous dispersion is then mixed and reacted with the inorganic binder (column 2, lines 18-41). Examples of inorganic binder include Portland cements, white cements, high alumina cements, cements mixed with fly ash etc. (column 2, lines 45-51).

The difference between Burge et al. and the present claims is that the prior art does not teach a dispersing agent comprising a copolymer prepared by polymerizing at least one alkoxy-, aryloxy-, alkylaryloxy- or arylalkoxy-polyalkylene glycol ethylenic urethane monomer with at least one anionic monomer and at least one non-ionic monomer.

Art Unit: 1713

Blum et al. disclose an aqueous suspension comprising water, at least one mineral substance and a copolymer as a dispersion agent and/or crushing aid. The copolymer contains at least one ethylenically unsaturated monomer having at least one carboxyl function (anionic monomer), optionally at least one ethylenically unsaturated monomer having at least one sulphonyl function or phosphoryl function (anionic monomer), optionally at least one ethylenically unsaturated monomer which has no carboxyl function (which includes non-ionic monomers), and at least one surface-active, oxyalkylated, ethylenically unsaturated monomer. Furthermore, the polymerizable unsaturated radical monomer may be derived from an unsaturated urethane (column 2, lines 24-54). The copolymer may be used as a dispersing agent and/or crushing aid regardless of the type of mineral substances to be dispersed or crushed (column 2, lines 20-37). The copolymer is useful to prepare aqueous suspensions of a variety of mineral substances, regardless of whether the mineral substances have charged hydrophobic or hydrophilic surfaces (column 2, lines 15 and 16). In light of such benefit, it would be obvious for the ordinary skill in the art at the time the invention was made to incorporate as dispersing and/or crushing aid, copolymers based on the invention of Blum into the aqueous dispersions of Burge et al. for construction material and thereby obtain the present invention (*claims 1 and 22*).

The disclosure of Blum further includes in the working example, an alkoxy-polyethylene glycol urethane monomer with a 22-carbon atom chain in the alkoxy part (column 9, lines 13-14, *claims 2 and 23*).

In regard to *claims 3 and 24*, the disclosure of Blum includes as comonomers, at least one oxyalkylated, ethylenically unsaturated monomer with the polymerizable unit derived from acrylate, methacrylate or unsaturated urethane group (column 3, lines 35-58).

In regard to *claims 5 and 26*, the disclosure of Blum further includes that the copolymer as a dispersing agent and/or crushing aid may contain 10-99% by weight, of at least one acid containing ethylenically unsaturated monomer (anionic monomer), 0-50% of at least one ethylenically unsaturated monomer of the non-ionic type and 1-99% by weight of at least ethylenically unsaturated oxyalkylated monomer (column 4, lines 7-66).

Examples of ethylenically unsaturated monomers of the anionic type included in the disclosure of Blum are acrylic, methacrylic, crotonic, isocrotonic, fumaric, maleic acids etc. (column 3, lines 3-19, *claims 6 and 27*).

Examples of ethylenically unsaturated non-ionic monomers may include methyl, ethyl, butyl, 2-ethylhexyl acrylates and methacrylates, acrylamide, vinylpyrrolidone etc. (column 3, lines 20-34, *claims 7 and 28*).

In regard to *claims 12*, the disclosure of Blum includes that the copolymer may be treated and separated into several phases. Furthermore the copolymer may be used in the totally acid form (column 6, lines 2-7, *claims 13 and 33*).

The disclosure further includes that the copolymer may be neutralized using neutralizing agents having a monovalent function or a polyvalent function (*claims 14 and 34*), for example, those selected from the group comprising alkaline cations, in particular sodium, potassium or ammonium or alternatively, the primary, secondary or tertiary aliphatic and/or cyclic amines such as ethanol amines, diethylamine, cyclohexylamine etc. (*claims 15-17, 35-37*), or those selected from the group comprising the divalent alkaline earth cations, in particular magnesium and calcium and trivalent cations such as aluminum (column 5, lines 53-68, *claims 18, 19, 38 and 39*).

Art Unit: 1713

In regard to *claims 20, 21, 40, 41*, the disclosure of Blum includes that the mineral fillers that may dispersed using polymeric copolymers include synthetic and natural calcium carbonates, chalks, calcites, marbles, kaolins, calcium sulphate, titanium dioxides, aluminum hydroxides etc. (column 6, lines 42-62).

Burge et al. further disclose that the polymer modified aqueous dispersion of silicon dioxide may be useful with lime, gypsum to magnesium, phosphate and cement mortars (*claims 43, 45, 46, 48, 50, 51*), light, normal and heavy concrete (*claims 42, 44, 47, 49*) and spray mortar and spray concrete (column 2, lines 4-11). Such dispersions may be useful for **preparing a building and/or construction material** (column 1, lines 11-15, *claims 52-56*). It's common knowledge that the building and/or construction materials may be used in a variety of applications such as in buildings, bridges, roads, off shore construction and in petroleum cements. The selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination in *Sinclair & Carroll Co. v. International Corp.*, 325 U.S. 327, 65 USPQ 297 (1945).

11. *Claims 8 and 29* are rejected under 35 U.S.C. 103(a) as being unpatentable over Burge et al. (US 4,686,252) in view of Blum (US 6,057,398) and Plastics Materials, by J. A. Brydson (Butterworth Scientific, 4th Ed., 1982, page 698, lines 1-3).

The prior art based on disclosures of Burge et al. and Blum are adequately set forth in paragraph 4 and incorporated herein by reference. The disclosure of Blum includes working

Art Unit: 1713

examples with methacrylurethane with 25 units of ethylene oxide and hydrophobic end group based on trisalkyl phenyl radical (column 10, lines 65-67).

The difference between the prior art and the present invention is that the prior art does not disclose that the alkoxy-, aryloxy-, alkylaryloxy- or arylalkoxy- polyalkylene glycol ethylenic urethane monomer is a reaction product of the corresponding polyalkylene glycol and polymerizable unsaturated isocyanate.

The book of "Plastic Materials" by Brydson (page 698, lines 1-3) teaches that the reaction of an isocyanate and an alcohol results in the formation of a urethane. Therefore, it would be obvious for one of ordinary skill in the art at the time the invention was made to prepare the alkoxy polyalkylene glycol ethylenic urethane monomer by reacting an alkoxy polyalkylene glycol and with an ethylenically unsaturated isocyanate and thereby obtain the present invention.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (703) 305-8490.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached at (703) 308-2450.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist at (703) 308-2351.

Art Unit: 1713

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SATYA SASTRI

February 25, 2005

TATYANA ZALUKAEVA
PRIMARY EXAMINER

